



Exponential Business and Technologies Company

Connecting the World

EDC No.: 0101005

Revision: 1.0

Contract Lab Services Request Form

For Nanomechanical and Nanotribological Testing and Analysis

Instruction: Please fill out this form completely and submit it with your specimens. Information on applications and other analyses performed on the specimens may be helpful in selecting optimal testing methods and conditions. Please provide this kind of information as much as possible. If a non-disclosure agreement is required, please arrange it to be fully executed before submission.

Contact Name: _____

Company: _____

Mailing Address: _____

Phone: _____ **Fax:** _____

Email: _____

Total Number of Specimens Submitted: _____

Specimen Packaging Date: _____

Expected Finishing Date: _____

Specimen Name or Number: _____

Description of Specimen (shape, size, surface roughness, oxide layer, film thickness, substrate materials, etc., if known):

Address: 7127 Shady Oak Road, Minneapolis, MN 55344, U. S. A.
Tel: +1 (952) 334-5486, Fax: +1 (952) 746-8086, Email: info@ebatco.com

www.ebatco.com



Test and Analysis Requested:

Nanoindentation

- Nanohardness*
- Elastic modulus*
- Fracture toughness*
- Force-displacement data*
- Stress-Strain curve*
- Surface adhesion*
- Surface attraction*
- Creep test*
- Stress relaxation test*
- Depth profiling*

Nanoscratch

- Thin film interfacial adhesion*
- Scratch resistance*
- Mar resistance*
- Film delamination critical load*
- Nanoscale push test*
- Nanoscale pull test*

Nanoscale Tribological Test

- Nanowear*
- Friction coefficient*
- Tribofilm analysis*
- Lubricity evaluation*
- Single asperity simulation*
- Load dependence*
- Speed dependence*
- Cycle/distance dependence*

Dynamic Mechanical Analysis

- Storage modulus*
- Loss modulus*
- Tangent Delta*
- Depth profile of modulus*
- Effect of load*
- Effect of displacement amplitude*
- Effect of frequency*
- Cyclic loading*
- Contact fatigue test*

Scanning Probe Microscopy

- Surface morphology with nm resolution*
- Microstructure analysis*
- Surface roughness measurement*
- Critical dimension measurement*
- Thin film thickness measurement*
- Nano/micro scale surface patterning*
- Nanomachining*

Modulus Mapping

- Storage modulus mapping*
- Loss modulus mapping*
- Tangent Delta mapping*
- Interface analysis*
- Interphase analysis*
- Copolymer phase identification*



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Test Environment and Conditions:

- | | | |
|---|--------------------------------------|---|
| <input type="checkbox"/> Room temperature | <input type="checkbox"/> Ambient air | <input type="checkbox"/> Humidity control |
| <input type="checkbox"/> Elevated temperature | <input type="checkbox"/> Low vacuum | <input type="checkbox"/> Lubricated |
| <input type="checkbox"/> Cooled temperature | <input type="checkbox"/> Gas purge | <input type="checkbox"/> Immersed in liquid |

Special Instruction on Experiment:

Please submit the finished form to: NAT Lab at Ebatco

Address: 7127 Shady Oak Road, Eden Prairie, MN 55344, USA

Tel: (952) 334-5486, Fax: (952) 746-8086, Email: natlab@ebatco.com

Website: www.ebatco.com

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